

Docket No.: 2825.2025-001

Title: Association of Thrombospondin..

entors: Stacey Bolk, *et al.*



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Nucleotide

Protein

Genome

Structure

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☐ 1: GI = "4507486" [GenBank] Homo sapiens thrombospondin... PubMed, Protein, Related Sequences, 1

LOCUS NM_003247 5784 bp mRNA PRI 31-OCT-2000
DEFINITION Homo sapiens thrombospondin 2 (THBS2), mRNA.
ACCESSION NM_003247
VERSION NM_003247.1 GI:4507486
KEYWORDS
SOURCE human.
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE 1 (bases 1 to 5784)
AUTHORS LaBell,T.L., Milewicz,D.J., Distech,C.M. and Byers,P.H.
TITLE Thrombospondin II: partial cDNA sequence, chromosome location, and
expression of a second member of the thrombospondin gene family in
humans
JOURNAL Genomics 12 (3), 421-429 (1992)
MEDLINE 92217961
REFERENCE 2 (bases 1 to 5784)
AUTHORS LaBell,T.L. and Byers,P.H.
TITLE Sequence and characterization of the complete human thrombospondin
2 cDNA: potential regulatory role for the 3' untranslated region
JOURNAL Genomics 17 (1), 225-229 (1993)
MEDLINE 94010892
COMMENT PROVISIONAL REFSEQ: This record has not yet been subject to final
NCBI review. The reference sequence was derived from L12350.1.
FEATURES
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/codon_start=1

FIG. 1a

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Investors: Stacey Bolk, *et al.*

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/evidence=experimental

/product="thrombospondin 2"

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misc_feature

297..884

/note="TSPN; Region: Thrombospondin N-terminal -like domains"

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misc_feature

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1728..1883

/note="TSP1; Region: Thrombospondin type 1 repeats"

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/note="putative"

/citation=[2]

polyA_site

5784

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FIG. 1b

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3961 atctaaccce ctagaggaaa ccagtttggg gatatatgag actttatgtg gagtgaanaa

FIG. 1c

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4021 tgggcatgcc attacattgc tttttcttgt ttgttttaaaa agaatgacgt ttacatatata
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5761 aataaattgt aaaaaaggtt ttct (SEQ ID NO: 1)

FIG. 1d

Novel association found in Gene Quest with thrombospondin 2 (THBS2)

Association

Odds ratios (with 95% confidence intervals) for association of THBS2 genotypes with CAD and MI in the Gene Quest population.

THBS2	CAD cases	controls	Odds ratios (95% C.I.)	P value	adjusted ORs (95% C.I.)	P value
tt	160 (.48)	207 (.51)	1.0	-	1.0	-
tg	153 (.46)	158 (.39)	1.25 (.93-1.70)	.15	1.24 (.88-1.76)	.23
gg	17 (.05)	39 (.10)	.56 (.31-1.03)	.06	.65 (.34-1.26)	.20
<i>*χ^2 p value=.025</i>						
THBS2	MI cases	controls	Odds ratios (95% C.I.)	P value	adjusted ORs (95% C.I.)	P value
tt	84 (.47)	207 (.51)	1.0	-	1.0	-
tg	87 (.49)	158 (.39)	1.36 (.94-1.95)	.10	1.38 (.92-2.09)	.12
gg	6 (.03)	39 (.10)	.38 (.16-.93)	.03	.39 (.15-1.03)	.06
<i>*χ^2 p value=.0085</i>						

*the χ^2 statistic tests for a difference in the distribution of genotypes in the table of data

CAD=coronary artery disease

MI=myocardial infarction

Adjusted ORs=adjusted odds ratio

Heterozygotes show a (non-significant) trend for increased risk of MI. Homozygotes for the variant allele (g) appear to have a significant protective effect. Both of these effects are independent of BMI, hypertension, diabetes, current age and gender (see Oradj).

Multivariate logistic regression taking all three THBS genes into account for their association with MI.

GENOTYPE	N	OR (MI)	P (MI)
TSP1_NN	177	1.00	-
TSP1_SN	52	1.07	.76
TSP1_SS	5	8.44	.06
TSP2_tt	103	1.00	-
TSP2_tg	106	1.54	.03
TSP2_gg	9	0.51	.12
TSP4_AA	133	1.00	-
TSP4_AP	94	1.79	0.004
TSP4_PP	14	1.54	.31

FIG. 2